

Special Projects

CIRCLE IMPROVEMENTS

By
NJDOT

DOUGLAS FRANK DILLON

Principal Engineer, Traffic

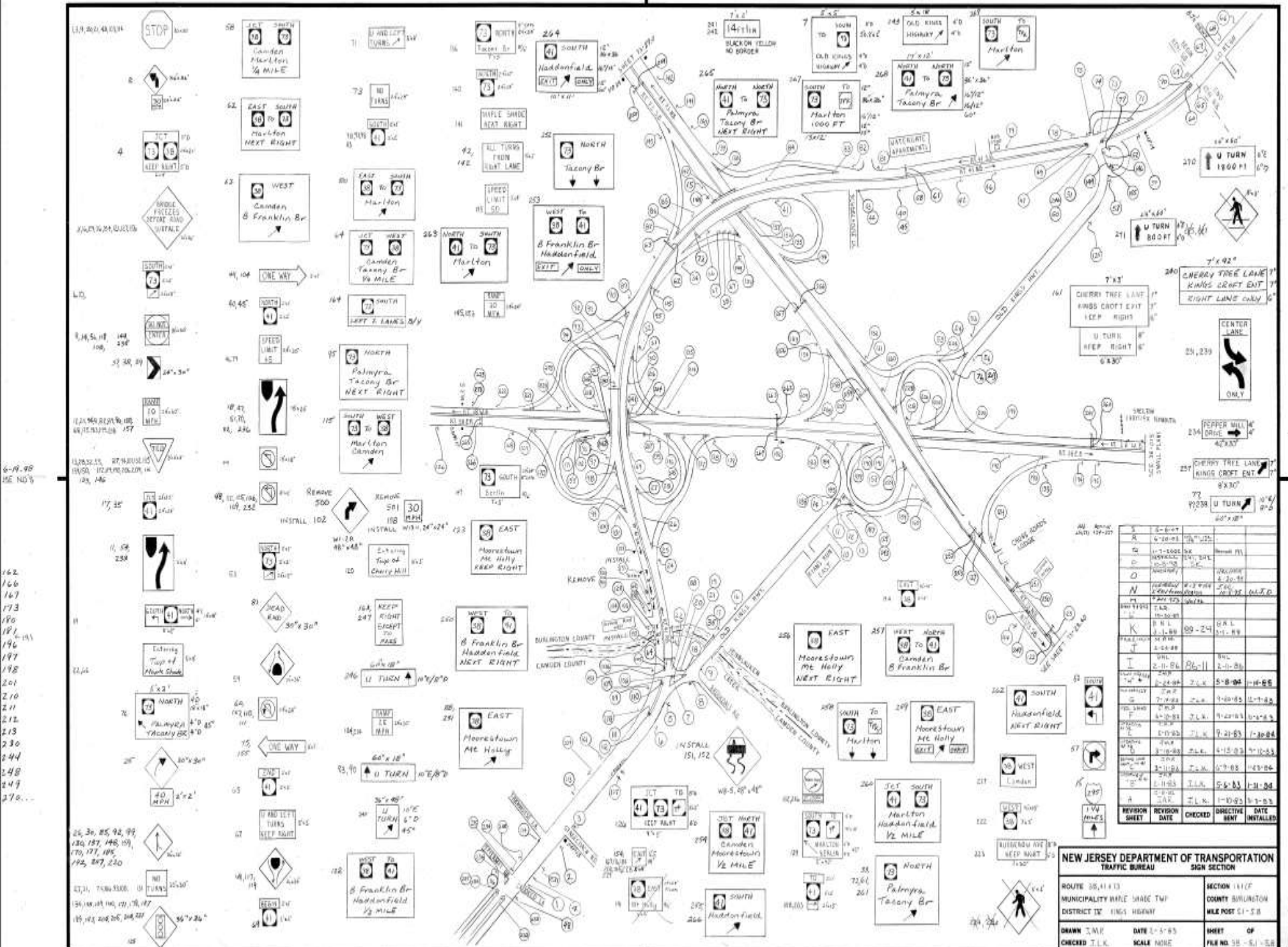
Douglas.Dillon@dot.nj.gov



SPECIAL PROJECTS SECTION

The following is some of what we do in
the special project section of the
Traffic Engineering Bureau.

(BTE)



OVERHEAD AND SPECIALTY



Circle Improvement Projects

Route 28 - Westfield Circle

Route 35 - Manasquan Circle

Route 70 - Lakehurst Circle

Route 35/66/Asbury Ave - Neptune Circle

Other Key Project Contributors

NJDOT

Roger Sequeira, Senior Engineer, Traffic

Consultant, Urban Engineers, Inc.

Scott Deihl, Chief Traffic Engineer, P. E., PTOE, AICP



Route 70 and Route 37 Lakehurst
Circle Improvements
Lakehurst Borough
Ocean County, NJ

Wednesday
October 28th, 2015



Rt. NJ 70

Traffic Counts
are Requested and Reviewed
Crash Data is Reviewed

Rt. NJ 37



Rt. NJ 70

Rt. NJ 37



70



Route 70 WB

- No Lane Striping in Circle
- Aggressive Entry Speeds from RT 70
- Poor Sight Distance for Inside Yielding Lane

Yielding Within Circle

- Unconventional
- Minimal storage
- Long Queues can form on RT 70

Yielding Within Circle

- Unconventional
- Minimal storage
- Queuing back on Route 70

70

37

Co

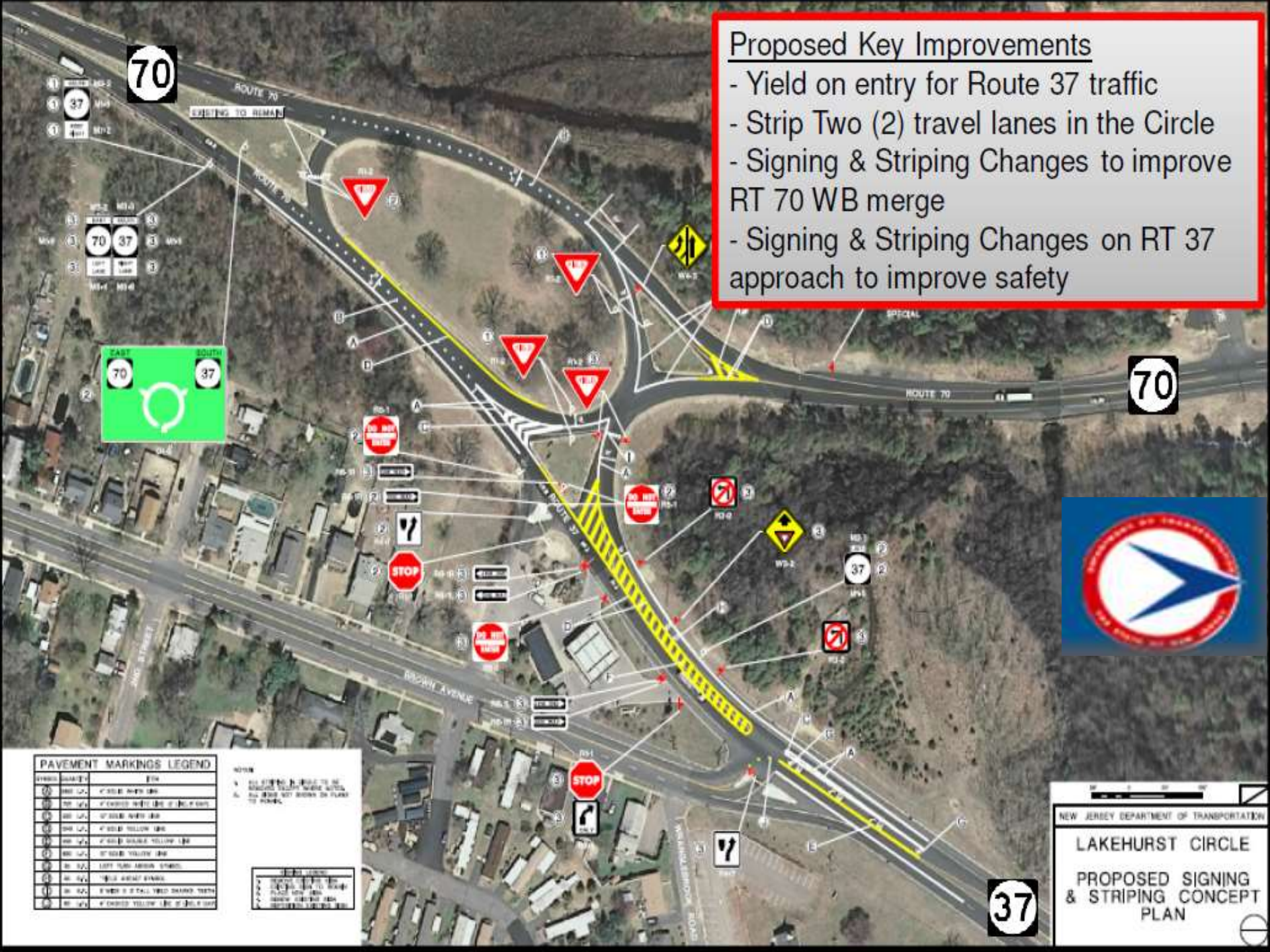


NEW JERSEY DEPARTMENT OF TRANSPORTATION

LAKEHURST CIRCLE
PROPOSED SIGNING
& STRIPING CONCEPT
PLAN

Proposed Key Improvements

- Yield on entry for Route 37 traffic
- Strip Two (2) travel lanes in the Circle
- Signing & Striping Changes to improve RT 70 WB merge
- Signing & Striping Changes on RT 37 approach to improve safety



PAVEMENT MARKINGS LEGEND

MARKING	DESCRIPTION
01	4" SOLID WHITE LINE
02	4" SOLID WHITE LINE (10' TO 12' WIDE)
03	4" SOLID WHITE LINE (12' TO 14' WIDE)
04	4" SOLID WHITE LINE (14' TO 16' WIDE)
05	4" SOLID WHITE LINE (16' TO 18' WIDE)
06	4" SOLID WHITE LINE (18' TO 20' WIDE)
07	4" SOLID WHITE LINE (20' TO 22' WIDE)
08	4" SOLID WHITE LINE (22' TO 24' WIDE)
09	4" SOLID WHITE LINE (24' TO 26' WIDE)
10	4" SOLID WHITE LINE (26' TO 28' WIDE)
11	4" SOLID WHITE LINE (28' TO 30' WIDE)
12	4" SOLID WHITE LINE (30' TO 32' WIDE)
13	4" SOLID WHITE LINE (32' TO 34' WIDE)
14	4" SOLID WHITE LINE (34' TO 36' WIDE)
15	4" SOLID WHITE LINE (36' TO 38' WIDE)
16	4" SOLID WHITE LINE (38' TO 40' WIDE)
17	4" SOLID WHITE LINE (40' TO 42' WIDE)
18	4" SOLID WHITE LINE (42' TO 44' WIDE)
19	4" SOLID WHITE LINE (44' TO 46' WIDE)
20	4" SOLID WHITE LINE (46' TO 48' WIDE)
21	4" SOLID WHITE LINE (48' TO 50' WIDE)
22	4" SOLID WHITE LINE (50' TO 52' WIDE)
23	4" SOLID WHITE LINE (52' TO 54' WIDE)
24	4" SOLID WHITE LINE (54' TO 56' WIDE)
25	4" SOLID WHITE LINE (56' TO 58' WIDE)
26	4" SOLID WHITE LINE (58' TO 60' WIDE)
27	4" SOLID WHITE LINE (60' TO 62' WIDE)
28	4" SOLID WHITE LINE (62' TO 64' WIDE)
29	4" SOLID WHITE LINE (64' TO 66' WIDE)
30	4" SOLID WHITE LINE (66' TO 68' WIDE)
31	4" SOLID WHITE LINE (68' TO 70' WIDE)
32	4" SOLID WHITE LINE (70' TO 72' WIDE)
33	4" SOLID WHITE LINE (72' TO 74' WIDE)
34	4" SOLID WHITE LINE (74' TO 76' WIDE)
35	4" SOLID WHITE LINE (76' TO 78' WIDE)
36	4" SOLID WHITE LINE (78' TO 80' WIDE)
37	4" SOLID WHITE LINE (80' TO 82' WIDE)
38	4" SOLID WHITE LINE (82' TO 84' WIDE)
39	4" SOLID WHITE LINE (84' TO 86' WIDE)
40	4" SOLID WHITE LINE (86' TO 88' WIDE)
41	4" SOLID WHITE LINE (88' TO 90' WIDE)
42	4" SOLID WHITE LINE (90' TO 92' WIDE)
43	4" SOLID WHITE LINE (92' TO 94' WIDE)
44	4" SOLID WHITE LINE (94' TO 96' WIDE)
45	4" SOLID WHITE LINE (96' TO 98' WIDE)
46	4" SOLID WHITE LINE (98' TO 100' WIDE)

NOTE:
A. ALL DISTANCES ARE TO BE
MEASURED TO THE CENTER
LINE OF THE ROAD.
B. ALL DISTANCES ARE TO BE
MEASURED TO THE CENTER
LINE OF THE ROAD.

PAVEMENT MARKING
A. ALL DISTANCES ARE TO BE
MEASURED TO THE CENTER
LINE OF THE ROAD.
B. ALL DISTANCES ARE TO BE
MEASURED TO THE CENTER
LINE OF THE ROAD.



NEW JERSEY DEPARTMENT OF TRANSPORTATION

LAKEHURST CIRCLE

PROPOSED SIGNING
& STRIPING CONCEPT
PLAN



SYMBOL	QUANTITY	ITEM
(A)	100	1/2" 3" SOLID WHITE LINE
(B)	100	1/2" 3" DASHED WHITE LINE (3" LINE 6' GAP)
(C)	100	1/2" 3" SOLID WHITE LINE
(D)	100	1/2" 3" SOLID YELLOW LINE
(E)	100	1/2" 3" SOLID DOUBLE YELLOW LINE
(F)	100	1/2" 3" SOLID YELLOW LINE
(G)	100	1/2" 3" SOLID YELLOW LINE
(H)	100	1/2" 3" SOLID YELLOW LINE
(I)	100	1/2" 3" SOLID YELLOW LINE
(J)	100	1/2" 3" SOLID YELLOW LINE
(K)	100	1/2" 3" SOLID YELLOW LINE
(L)	100	1/2" 3" SOLID YELLOW LINE
(M)	100	1/2" 3" SOLID YELLOW LINE
(N)	100	1/2" 3" SOLID YELLOW LINE
(O)	100	1/2" 3" SOLID YELLOW LINE
(P)	100	1/2" 3" SOLID YELLOW LINE
(Q)	100	1/2" 3" SOLID YELLOW LINE
(R)	100	1/2" 3" SOLID YELLOW LINE
(S)	100	1/2" 3" SOLID YELLOW LINE
(T)	100	1/2" 3" SOLID YELLOW LINE
(U)	100	1/2" 3" SOLID YELLOW LINE
(V)	100	1/2" 3" SOLID YELLOW LINE
(W)	100	1/2" 3" SOLID YELLOW LINE
(X)	100	1/2" 3" SOLID YELLOW LINE
(Y)	100	1/2" 3" SOLID YELLOW LINE
(Z)	100	1/2" 3" SOLID YELLOW LINE

NOTES:
 1. ALL STRIPING IS TO BE REMOVED EXCEPT WHERE NOTED.
 2. ALL SIGNS NOT SHOWN ON PLANS TO REMAIN.

SYMBOL	QUANTITY	ITEM
(A)	100	1/2" 3" SOLID WHITE LINE
(B)	100	1/2" 3" DASHED WHITE LINE (3" LINE 6' GAP)
(C)	100	1/2" 3" SOLID WHITE LINE
(D)	100	1/2" 3" SOLID YELLOW LINE
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(X)	100	1/2" 3" SOLID YELLOW LINE
(Y)	100	1/2" 3" SOLID YELLOW LINE
(Z)	100	1/2" 3" SOLID YELLOW LINE



NEW JERSEY DEPARTMENT OF TRANSPORTATION

LAKEHURST CIRCLE

PROPOSED SIGNING & STRIPING CONCEPT PLAN

EXISTING



PROPOSED



Route 35 Manasquan Circle Improvements Wall Township, NJ

**Wednesday
October 28th, 2015**



Project Location



Existing Conditions



Rt. NJ 35

Atlantic Avenue



Existing Conditions

Yielding Within Circle

- Unconventional
- Minimal storage
- Forms 2 lanes



Existing Conditions

Yielding Within Circle

- Unconventional
- Minimal storage
- Forms 2 lanes

Queue Spillback from Sea Girt Ave Signal

- Through circle
- Driver confusion



Proposed Plan



Proposed Plan



EXISTING



PROPOSED

Proposed Plan



Westfield Circle Improvements Westfield, NJ

Wednesday
October 28th, 2015



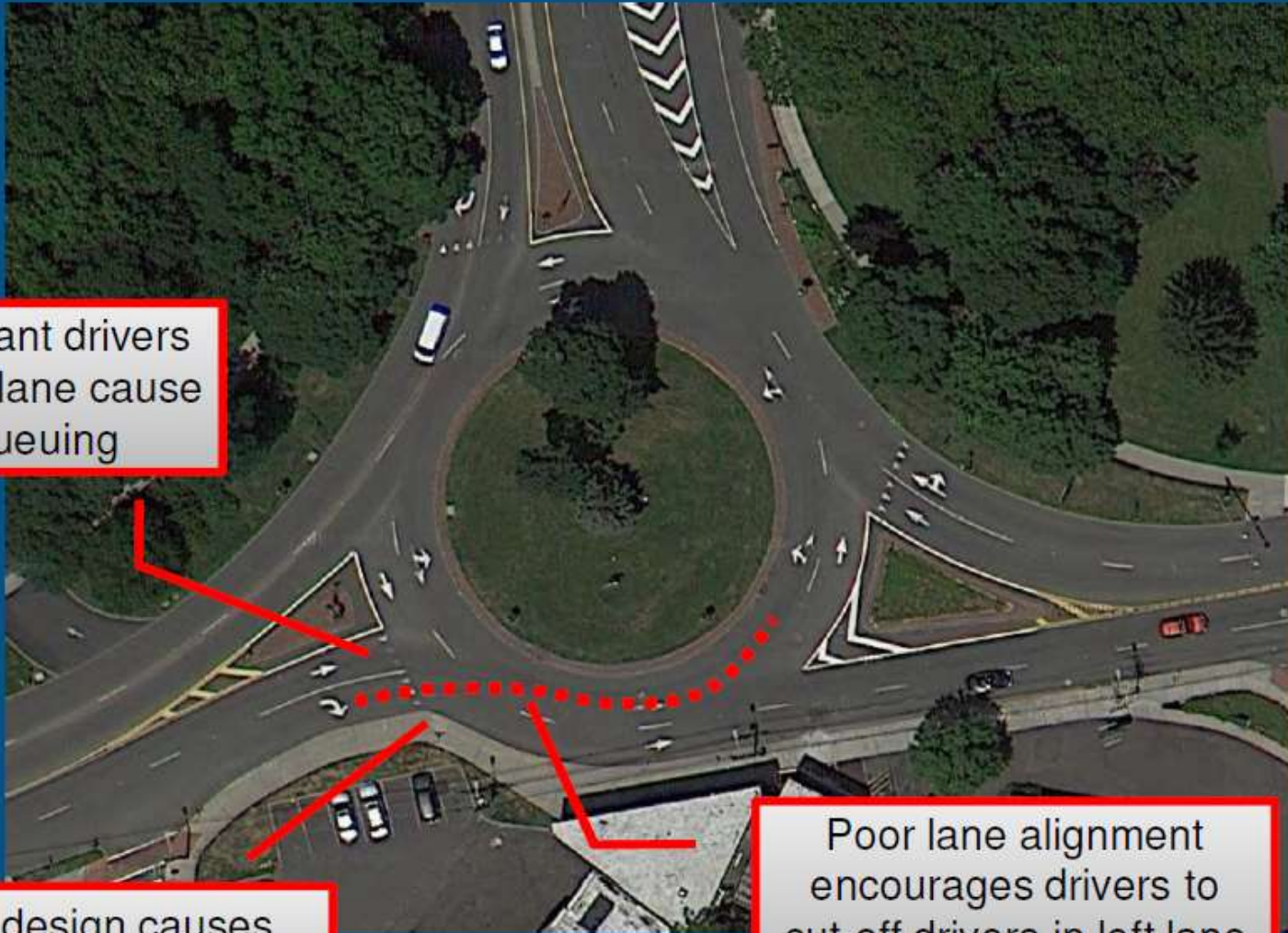
Project Location



Existing Conditions



Eastbound Approach



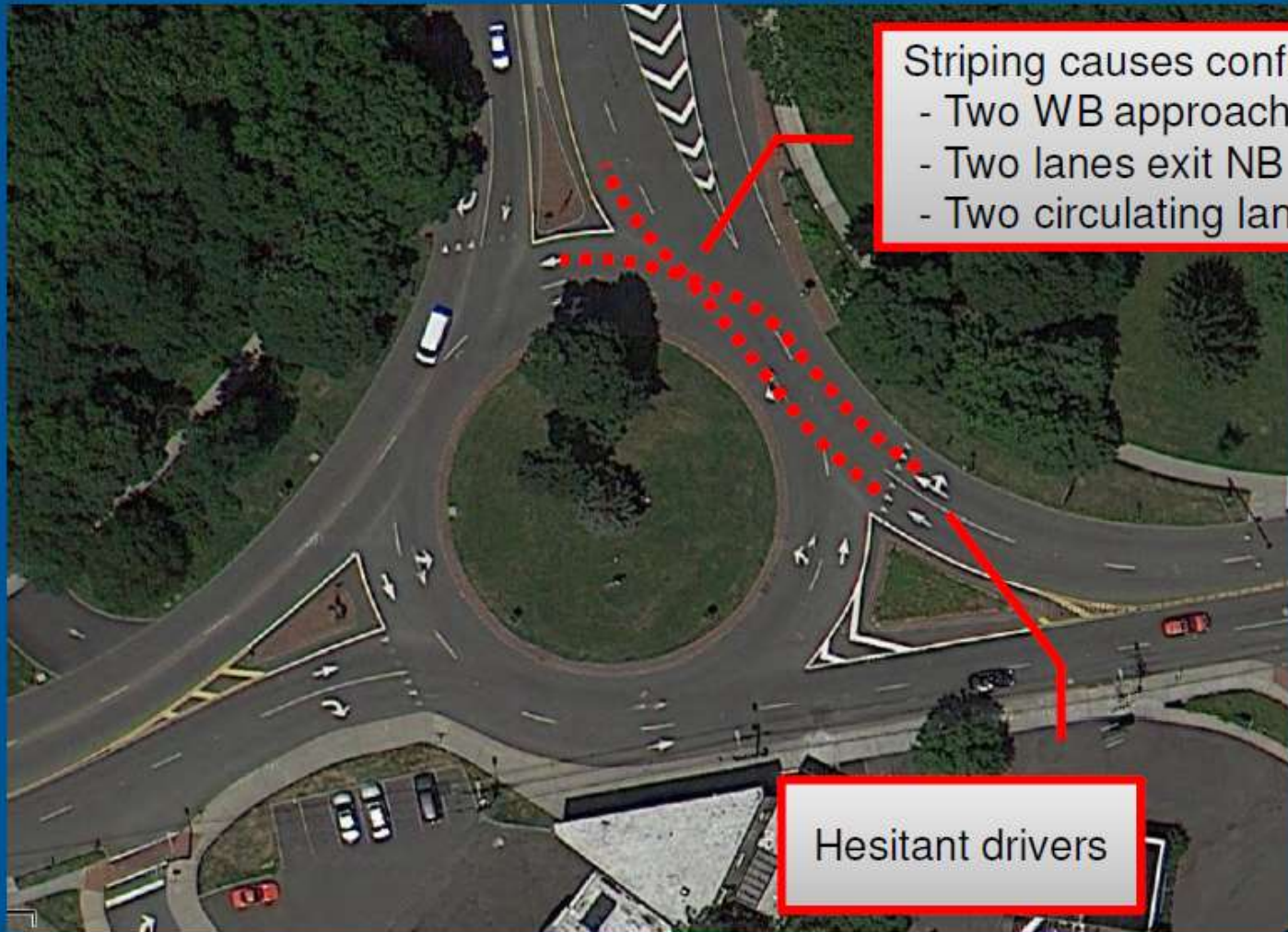
Hesitant drivers
in left lane cause
queuing

Curb design causes
vehicles to clip the curb

Poor lane alignment
encourages drivers to
cut-off drivers in left lane



Westbound Approach



Striping causes confusion:

- Two WB approach lanes
- Two lanes exit NB
- Two circulating lanes

Hesitant drivers



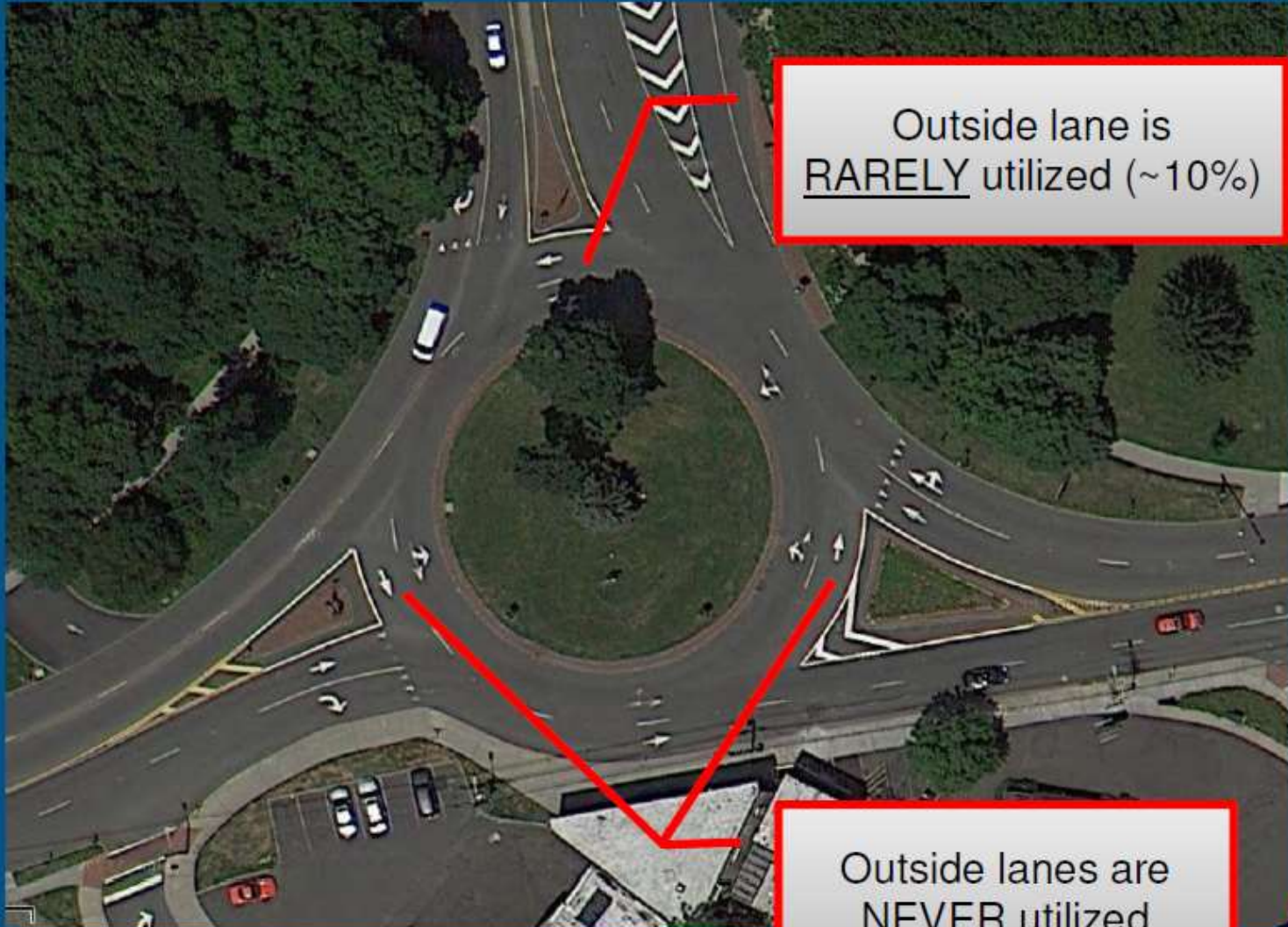
Southbound Approach

Circulating drivers
“drift” into right lane to
avoid WBL queue at
Broad

Difficult decision point
for SBL drivers



Within Circle



Outside lane is
RARELY utilized (~10%)

Outside lanes are
NEVER utilized

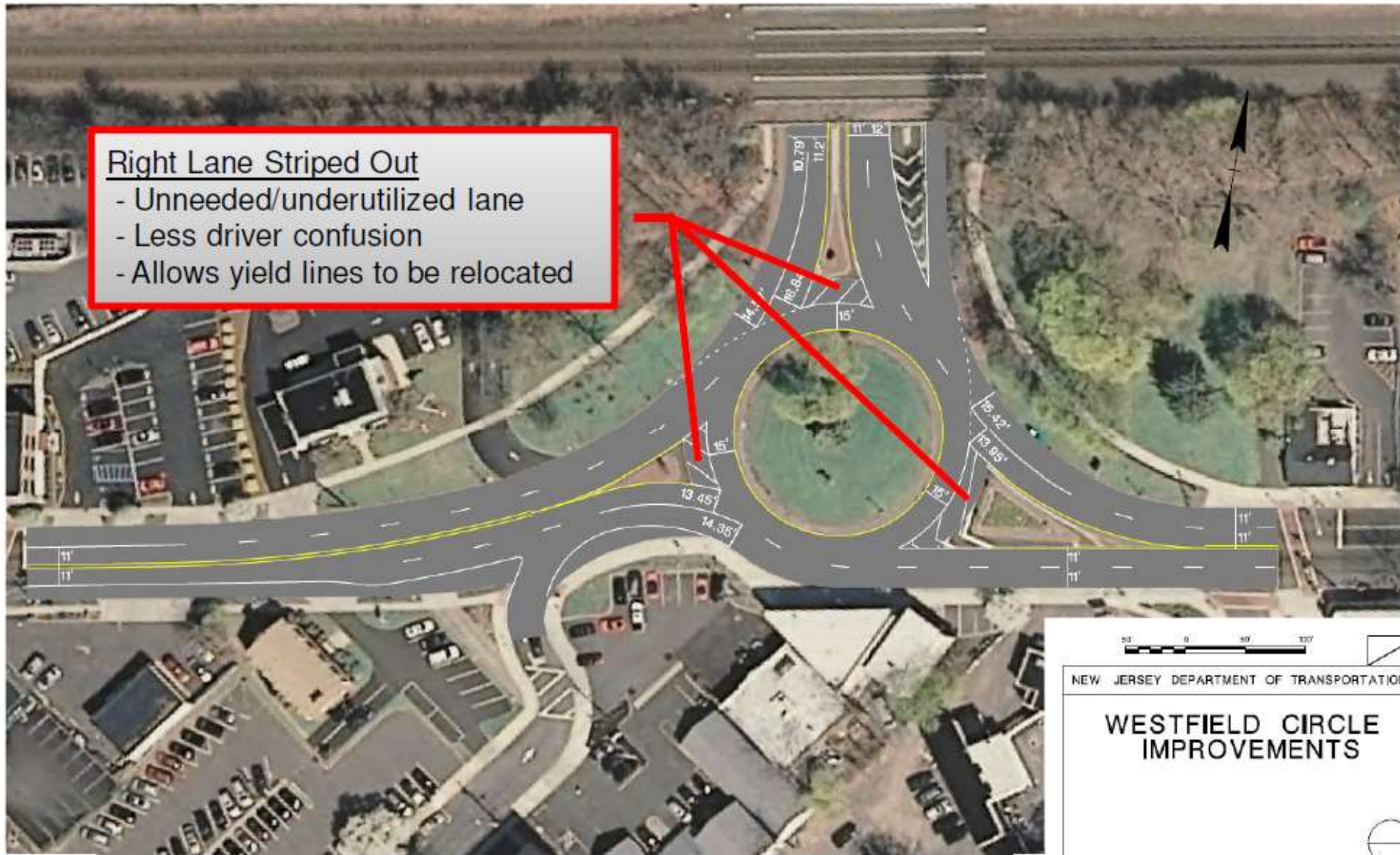


Proposed Plan



Right Lane Striped Out

- Unneeded/underutilized lane
- Less driver confusion
- Allows yield lines to be relocated



Proposed Plan

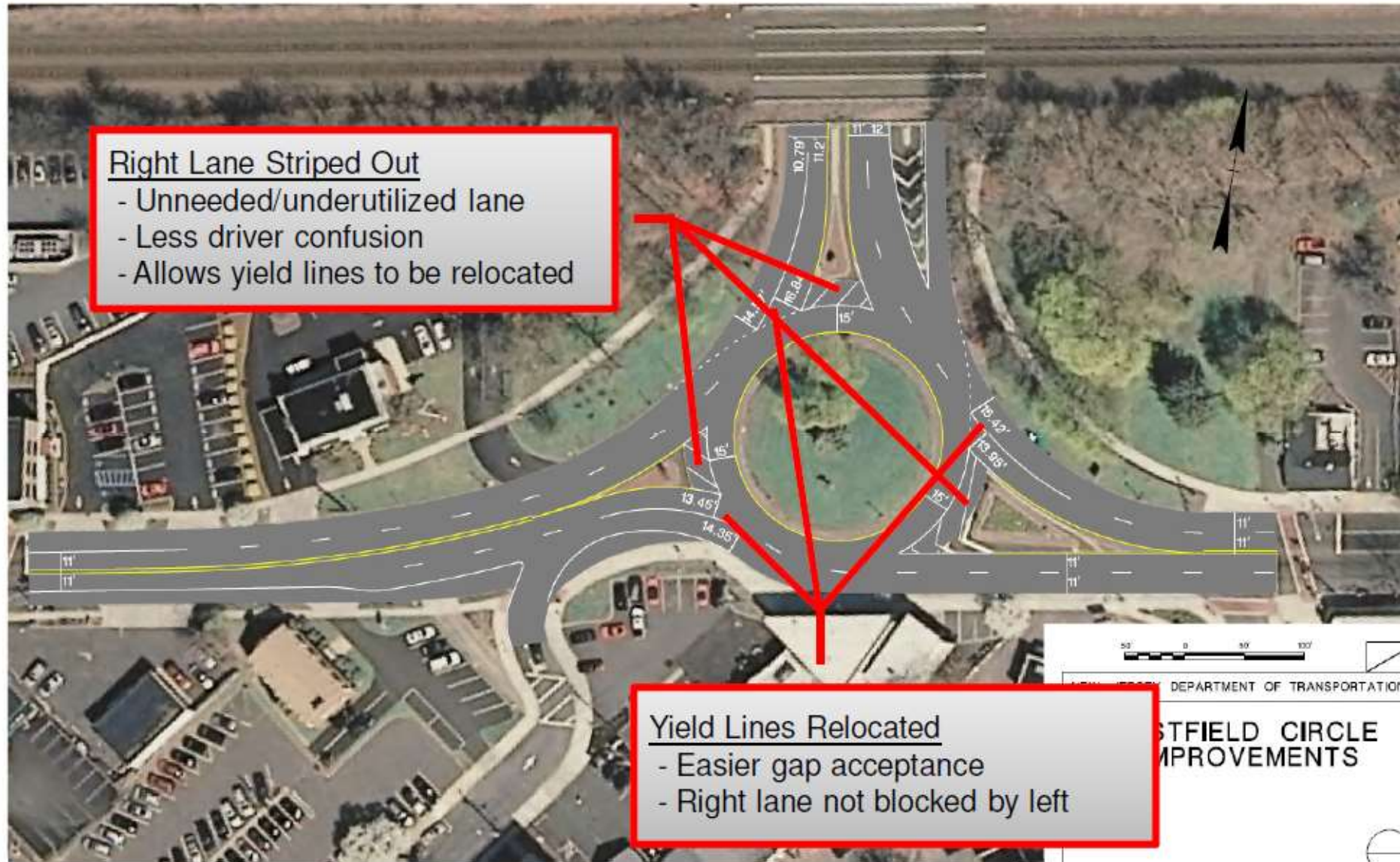


Right Lane Striped Out

- Unneeded/underutilized lane
- Less driver confusion
- Allows yield lines to be relocated

Yield Lines Relocated

- Easier gap acceptance
- Right lane not blocked by left



Proposed Plan



Right Lane Striped Out

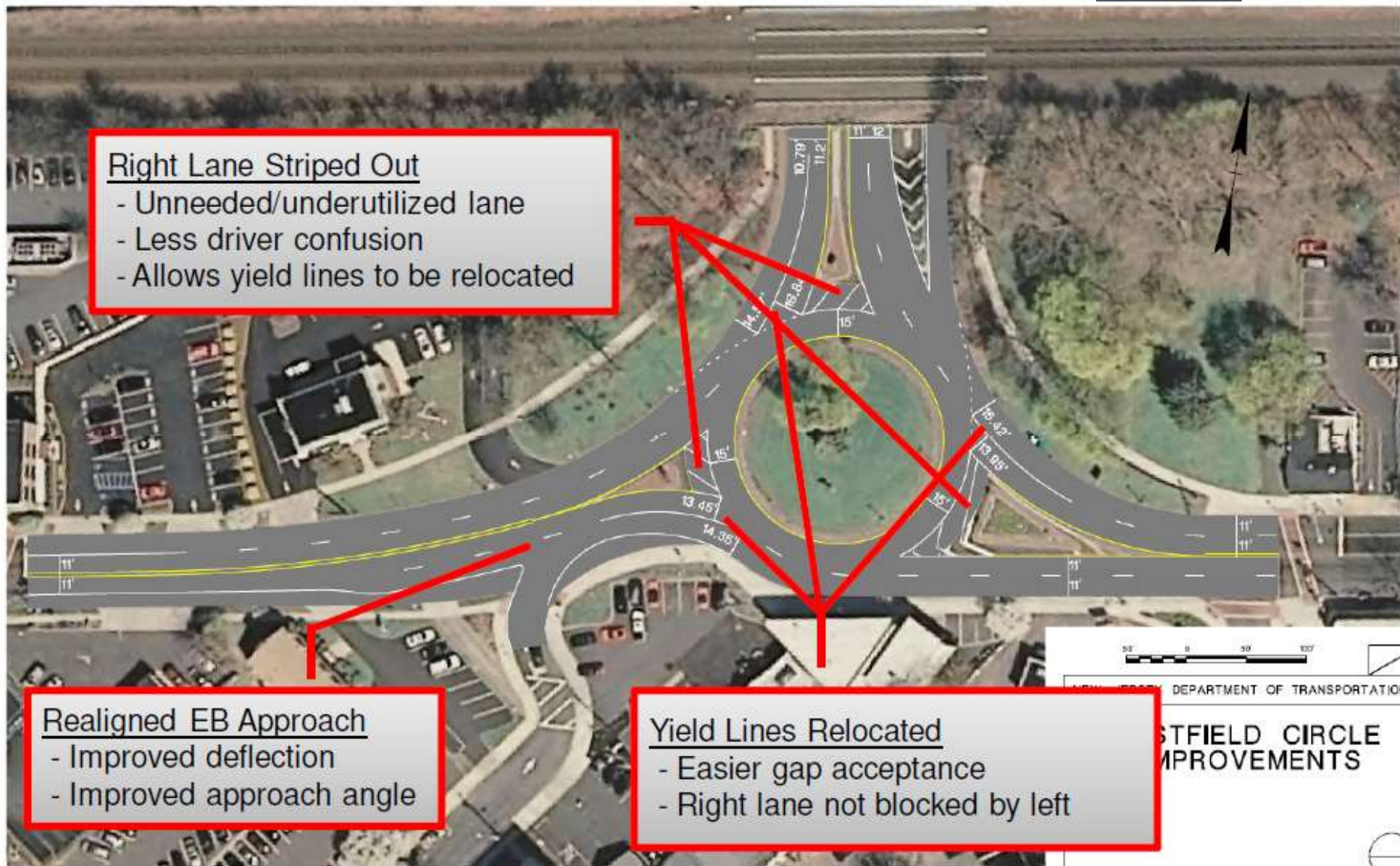
- Unneeded/underutilized lane
- Less driver confusion
- Allows yield lines to be relocated

Realigned EB Approach

- Improved deflection
- Improved approach angle

Yield Lines Relocated

- Easier gap acceptance
- Right lane not blocked by left



12/30/2002

OLD VERSION

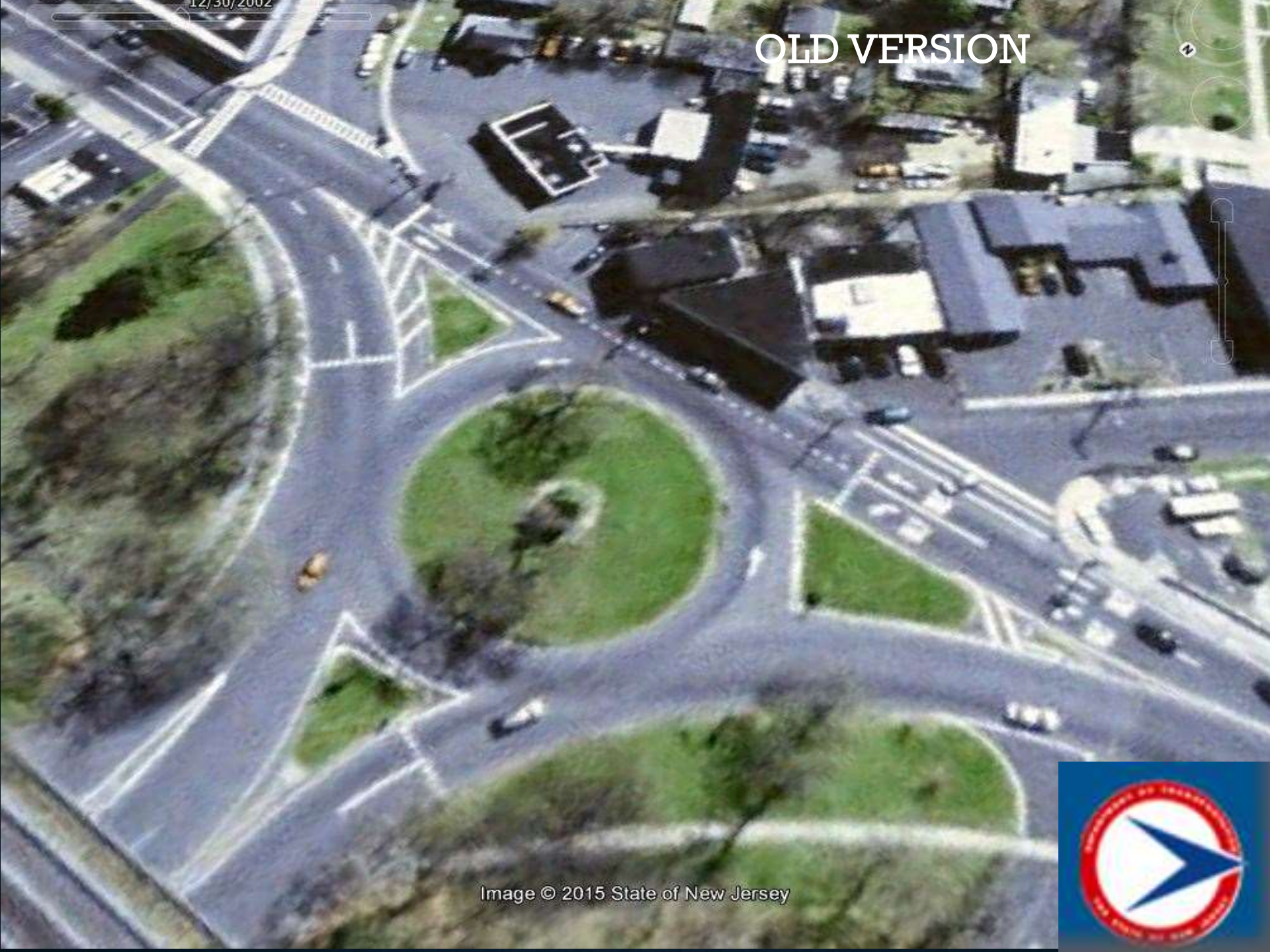


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6/17/2010

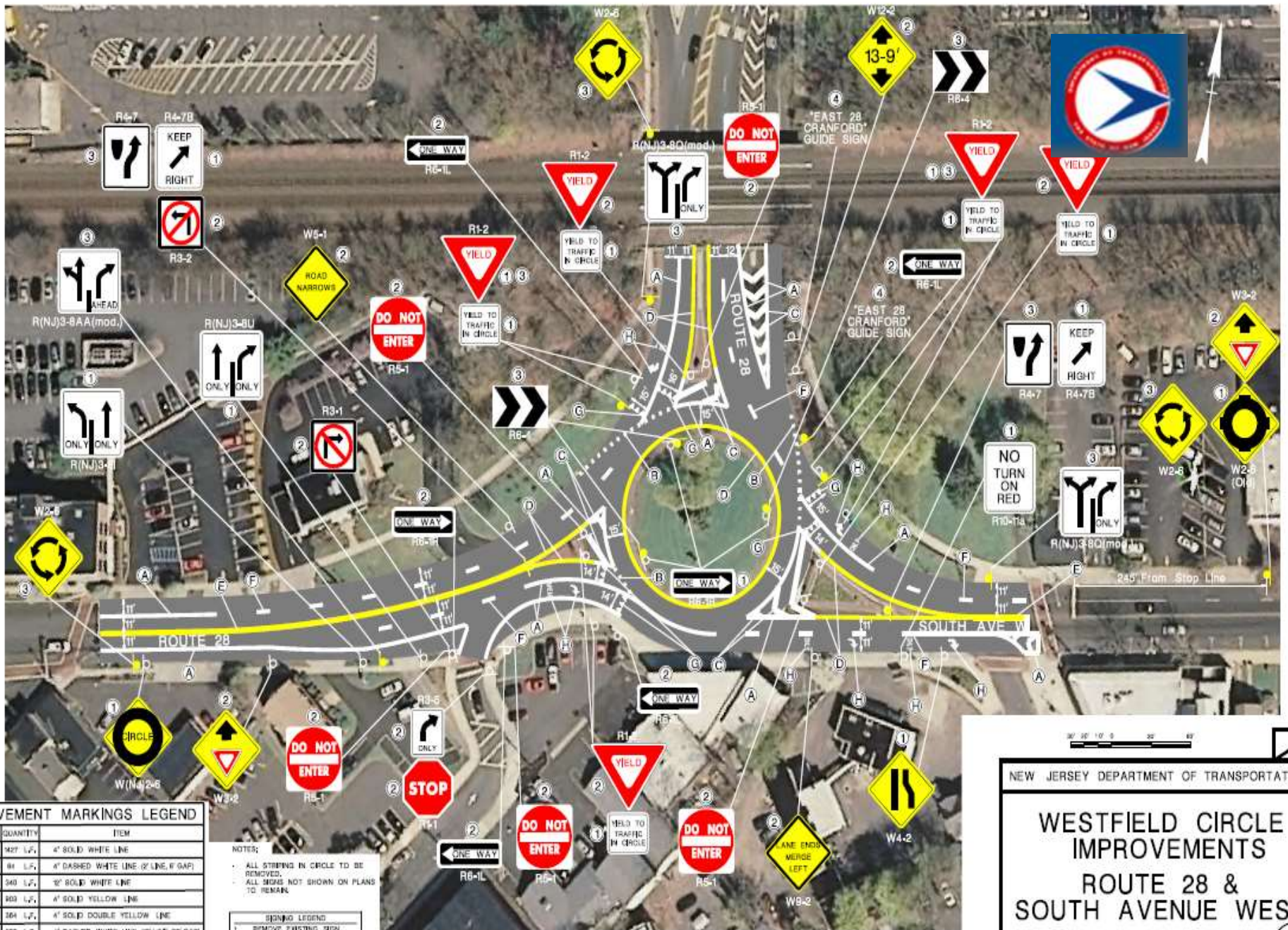
EXISTING BEFORE NEW STRIPING





WESTFIELD CIRCLE
IMPROVEMENTS
PAVEMENT MARKING
PLAN

- ALL STRIPING IN CIRCLE TO BE REMOVED.



PAVEMENT MARKINGS LEGEND

SYMBOL	QUANTITY	ITEM
(A)	127 L.F.	4" SOLID WHITE LINE
(B)	81 L.F.	4" DASHED WHITE LINE (2" LINE, 6" GAP)
(C)	348 L.F.	12" SOLID WHITE LINE
(D)	803 L.F.	4" SOLID YELLOW LINE
(E)	364 L.F.	4" SOLID DOUBLE YELLOW LINE
(F)	230 L.F.	4" DASHED WHITE LINE (10" LINE, 30" GAP)
(G)	48 S.F.	YIELD BAR
(H)	246 S.F.	PAVEMENT MARKINGS

- NOTES:**
- ALL STOPPING IN CIRCLE TO BE REMOVED.
 - ALL SIGNS NOT SHOWN ON PLANS TO REMAIN.
- SIGNING LEGEND**
- 1. REMOVE EXISTING SIGN
 - 2. EXISTING SIGN TO REMAIN
 - 3. PLACE NEW SIGN
 - 4. RELOCATE SIGN

NEW JERSEY DEPARTMENT OF TRANSPORTATION

WESTFIELD CIRCLE IMPROVEMENTS

ROUTE 28 & SOUTH AVENUE WEST

EXISTING



INSTALLED



NOT A NJDOT SIGN



Route 35 and Route 66
Double Circle Improvements
Townships of Ocean and Neptune
Monmouth County, NJ

Wednesday
October 28th, 2015



9/20/2010

EXISTING
BEFORE
NEW STRIPING







NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 35/ROUTE 66
NEPTUNE CIRCLE

CIRCLE IMPROVEMENTS
AS-CHANGED PLAN

MANY DRIVEWAYS
MANY POINTS OF INTEREST



NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 35/ROUTE 66
NEPTUNE CIRCLE

CIRCLE IMPROVEMENTS
AS-CHANGED PLAN





No
Stacking
issue



YIELD
BEFORE
ENTERING
CIRCLE



VEHICLES NO
LONGER
CROSSOVER
STRIPING





LEFT LANE
MUST TURN
LEFT OR
MERGE RIGHT



**THANK YOU
FOR COMING**

